

erected either on the shores of the Aral Sea or on the bank of one of its tributaries, the Amu-Daria River.

The latest design of pump to be used in this plant calls for movement of 4,000 cubic meters in 10 hours. Converting cubic meters into gallons of water yields the rather astonishing result of over a million gallons pumped in less than half a day.

Likewise astounding is the amount of energy in sunlight. Each year the energy falling on the earth is 1,000 times as much as that obtainable from all the coal, oil and water power used in the United States yearly if it were all available for power transformation.

But as in all forms of energy conversion, there is the question of efficiency in obtaining power from sunlight. One of the best methods, that of Willis and Boyle in the early years of the present century, was not more than one or two per cent. efficient.

*Science News Letter, February 2, 1935*

#### BIOPHYSICS

### Ultraviolet Rays Fatal To Eggs of Parasites

**U**LTRAVIOLET rays, at appropriate wavelengths and strength of dose, are fatal to the eggs of certain parasitic worms. The total energy of the light applied was equivalent to that of 12 days of average July sunlight, though the actual raying usually occupied only a few hours.

Previous observers of the killing effects of sunlight on these eggs had ascribed them simply to heating and drying out. But the present experimenters, W. H. Wright of the U. S. Department of Agriculture and Dr. E. D. McAlister of the Smithsonian Institution, feel that they have demonstrated a direct lethal effect due to the ultraviolet radiation itself.

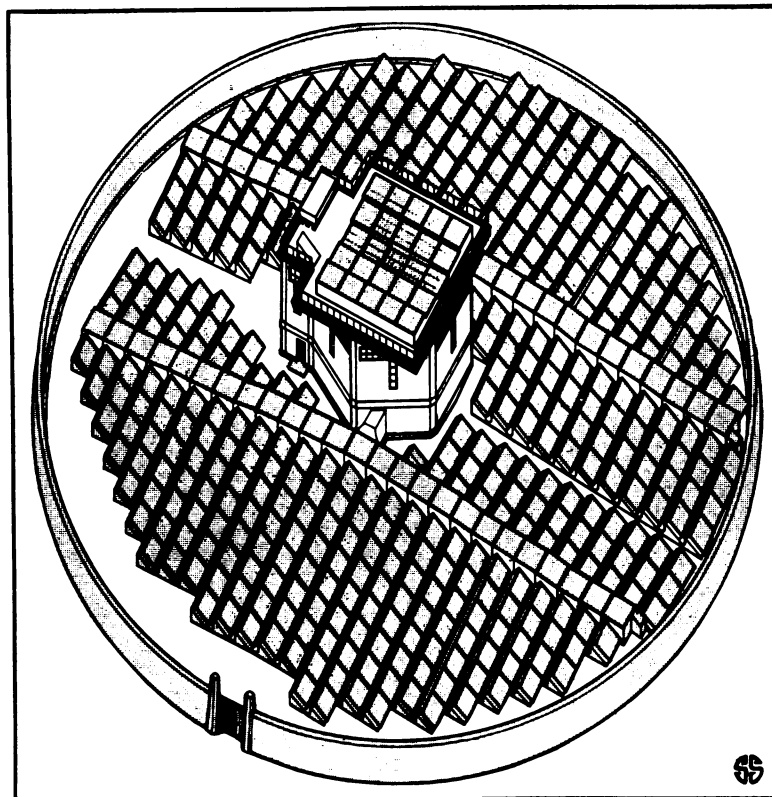
*Science News Letter, February 2, 1935*

## RADIO

Tuesday, February 5, 4:30 p. m.  
WHEN THE PAST BROKE ITS SILENCE, by Prof. E. A. Speiser, Department of Semitics, University of Pennsylvania.

Tuesday, February 12, 4:30 p. m.  
THE MARCH OF THE MICROBES, by Homer N. Calver, Public Health Consultant, New York City.

In the Science Service series of radio addresses given by eminent scientists over the Columbia Broadcasting System.



SOVIET HOUSE OF THE SUN

*Design for a new solar energy station at Tashkent, capital of the Uzbek Republic of Central Asia, U. S. S. R. At this city Soviet scientists for several years have been operating a kitchen, bath and watertower on power supplied by the sun.*

#### MEDICINE

### Warns of Danger in New Reducing Drug

**D**ANGER may lie in wait for the person who tries to reduce by means of a simple method widely publicized during the last eighteen months.

Warning to doctors, press and public against the indiscriminate use of this drug, called alpha-dinitrophenol, is issued by the *Journal of the American Medical Association* (Dec. 21) in an editorial.

Three persons have died and many others are experiencing ill effects from the use of the new method of reducing.

Some 100,000 persons in the United States have been treated with this drug in the past year, it is estimated, in the belief that here at last was a method of reducing excess weight which was free from serious after-effects. The drug burns the extra body fat and carbohydrate without affecting the protein, the medical journal says. However, reports of its toxic effects have already persuaded many doctors to stop its use until

the results of further studies are known.

Skin rashes are among the unpleasant and sometimes alarming after-effects of the use of the drug. It seems to have no bad effect on the liver or on the circulation, but investigators believe it needs careful watching as to possible injury to the red blood cells.

The drug can be purchased at any corner pharmacy, and the medical journal regrets the fact that no restrictions have been placed upon its sale. One of the big points in its favor when the use of the drug as a reducing method was first announced was the ease of its administration. The fat man or woman merely swallowed three capsules a day and within three months or so normal weight was achieved.

The editor of the medical journal urges that the sale of alpha-dinitrophenol be restricted to that ordered by doctors' prescription and that its use by medical men be carefully supervised. Probably it should be used by the physician, the Journal states, only when reduction of weight is important for health and when ordinary dietary methods have failed.

*Science News Letter, February 2, 1935*